

GENUS TREPOBATES HERRICH-SCHAEFFER
(HEMIPTERA; GERRIDAE)

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The genus *Trepobates* Herrich-Schaeffer is known only from the Western Hemisphere. This paper enumerates 10 species, including a new species described from Panama and Mexico. As most of the species are about the same size and very similar in color and markings, they are often confused and wrongly named in collections. Individual variability in color markings is unusually pronounced in most species, and the degree of variability in different species is about the same. Both alate and apterous forms are generally common, and deälated males and females are often encountered during the breeding season.

The genus *Trepobates* is composed of moderately large and robust species with long legs. They are very alert and swift. They inhabit the quiet parts of running and protected coves of standing waters. Although primarily inhabitants of fresh bodies of water, most species also live and breed in brackish water near the mouth of streams flowing into the seas. Salt water marshes, lagoons and pools along the sea shore also afford favorable abodes. *T. vazquezae* Drake and Hottes is the only species of the genus not as yet recorded from fresh water. *T. trepidus* Drake and Harris and *T. taylori* (Kirkaldy) are very common and widely disseminated in the tropics, and sometimes are almost as abundant in brackish marshes, lagoons and ponds along the sea coast as in fresh water habitats.

TREPOBATES **PANAMENSIS** Drake and Hottes, new species

APTEROUS FORM: Color quite variable, especially the amount of yellow and black on dorsal surface of pro- and mesonotum; general appearance and coloration very similar to *T. taylori*. Pronotum blackish with a broad yellow or orange-yellow stripe on each side. Mesonotum with a broad, bow-like (concave within) yellow stripe on each side, the ends not meeting in front or behind. Thorax beneath pale testaceous; sides with a broad, sinuate, black-fuscous stripe. Venter and genital segments pale testaceous. Dorsal surface of abdomen bluish black with two oblique spots near the base and most of last tergite yellowish. Yellowish marks on dorsal surface more or less tinged with orange.

SIZE: Length, 3.10-3.50 mm.; width, 1.38-1.52 mm.

HEAD: Width across eyes, 1.00 mm. Antennae fuscous-brown with base of first segment testaceous; formula—(male) I, 56; II, 35;

III, 36; IV, 44; (female), I, 65; II, 38; III, 42; IV, 50. Head beneath pale testaceous. Rostum brownish black, testaceous at base, extending about two-fifths of its length beyond fore coxae.

THORAX: Pronotum much wider than long (65:36). Mesonotum very large, wider than pronotum, truncate behind. Legs brownish fuscous with base of femora, coxae and trochanters pale testaceous, shortly pilose, with longer pale hairs beneath. Front femora moderately incrassate, a little bowed. 1.25 mm. long, not constricted near apex in male. Middle legs very long, brown-fuscous with a short basal stripe above and narrow apical part yellowish; femora moderately incrassate, with a fringe of short hairs on front and hind margins of ventral surfaces (hairs about one-fourth as long as the diameter of the segment), 1.40 mm. long. Hind legs much shorter and slenderer; femora 2.10 mm. long; tibiae 1.75 mm. long.

ABDOMEN: Length, 1.60 mm. Connexiva beset with short dark hairs on outer margins, with a large, quadrate, orange-brown spot on each segment.

MALE: Last segment of venter about twice as long as preceding segment; first genital segment tapering a little posteriorly, clothed beneath with inconspicuous pubescence. Parameres rather broad, curved, strongly tapering apically with apex pointed. First genital segment above dark fuscous, roundly emarginate behind. Anterior femora not noticeable, constricted before apex.

FEMALE: Broader and stouter than male. Hind femora within beset with a dense fringe of hairs near the base.

Macropterous form: Pronotum very large, velvety fuscous-black with hind margin and a wide stripe (broader anteriorly) on each side testaceous; median length much shorter than width across humeral angles (120:90); produced posteriorly with apex rounded. Hemelytra much longer than abdomen, dark brown-fuscous with veins discernable, the deãlating suture distinct; wings also long and concolorous with hemelytra.

TYPE (male) and *allotype* (female), both apterous, collected in the wide reaches of a small stream, Feb. 2-10, 1939, Canal Zone, Panama. C. J. Drake. *Paratypess* 15 specimens, taken with type; 7 specimens, Panama City, Panama, Aug. 13, 1934, L. J. Rosebloom; 4 specimens, Tehautepec, Mex., July 21, 1951, and 5 specimens, Oaxaca, Mex., July 23, 1951, all taken by the authors. *Type* in Drake Collection, *paratypes* in collections of both authors.

Allied to *T. taylori* (Kirk.), but readily separated from it by

the much shorter hind pair of legs, the short hairs on underside of intermediate femora and non-constricted apex of fore femora in male; the female has the hind margin of the last ventral segment beset with rather long dark hairs. These same characters also separate both sexes from *T. inermis* Esaki. The much shorter pair of hind legs also distinguishes it from *T. pictus* (H.S.). In the apterous form of the latter species, the female has the mesonotum produced posteriorly into a knob-like structure. The male parameres of these species are also different, and are not as broad or as strongly tapering posteriorly as in *T. panamensis* n. sp.

TREPOBATES TAYLORI (Kirkaldy)

Kallistometra taylori Kirkaldy, Entomologist, 32:28, 1899.

Trepobates comitalis Drake and Harris, Fla. Ent., 12:7, 1928.

Trepobates comitalis Drake and Harris, Bull. Brookl. Ent. Soc., c27:117, pl. 12, fig. 10, 1932.

MEXICO: Ciudad Valles, July 14, 1950 and Aug. 8, 1951; Ciudad Victoria, July 14, 1950, and Aug. 9, 1951; Acapulco, July 23, 1950, and July 13, 1951; Alvarado, July 28, 1951; Tehauntepec, July 23, 1951; Salina Cruz, July 24, 1951; Camargo, July 12, 1951; Tampico, July 16, 1950; Durango, Aug. 6, 1950; Veracruz, July 27, 1951; Mexico City, D. F., July 30, 1950; Puebla, July 30, 1950 and July 20, 1951; Aguascalientes, Aug. 5, 1950, and July 13, 1951; Guadalajara, Aug. 4, 1950; Patzcuaro, July 17, 1951. Other specimens have been examined from several Islands of the West Indies, Peru, Central America, and United States (Ariz., N. Mex., Tex.). It should also be noted that *T. trepidus* Drake and Harris was taken at all of the Mexican localities listed above. Distribution and habitat requirements of the two species are very similar. The long dark hairs on the male genital segments and the hind margin of the last ventral segment of the male distinguishes *trepidus* at once from *taylori*.

TREPOBATES FLORIDENSIS Drake and Harris

Trepobates floridensis Drake and Harris, Ohio Jr. Sci., 28:237, 1928.

This is the smallest species in the genus. The female is a little larger and more robust than the male, blackish with small yellowish markings. Hind margin of last ventrite pubescent, but without long hairs; mesonotum truncate behind. Hind femora short as in male, twice as long as tibiae (124:62). Middle femora short and stout, 80 unites or 1.00 mm. Length, 3.00 mm; width, 1.25 mm. Winged forms unknown.

ALLOTYPE (female), Jacksonville, Fla., in collection of C. J. Drake. The type (male) was also taken in Florida. The short mid-

dle and hind legs as well as the smaller body separate this species at once from its congeners.

Genus *TREPOBATES* Uhler, 1898

KALLISTROMETRA Kirkaldy, 1899

STEPHANIA B. White, 1883 (PREOC.)

TYPE, *HALOBATES PICTUS* Herrich-Schaeffer

1. *becki* Drake and Harris, 1932 Mex., U.S. (Ariz.)
2. *floridensis* Drake and Harris, 1928 Florida
3. *inermis* Esaki, 1926 U. S., Can.
4. *knighti* Drake and Harris, 1928 Mo., Io., Kan., Ark.,
Okla., Ill., Md., Ind.
5. *panamensis* Drake and Hottes, 1952 Mex., Pan.
6. *pictus* Herrich-Schaeffer, 1848 U. S. (East of Miss. R.)
7. *subnitidus* Esaki, 1926 Ind., Mich., Fla., Miss.
8. *taylori* (Kirkaldy), 1899 W. I., Mex., Cent.-Amer, Peru,
comitalis Drake and Harris, 1928 Col., Venez., U.S.
pictus Uhler, 1894 (in part) (Ariz., N. Mex., Tex.)
9. *trepidus* Drake and Harris, 1928 W. I., Mex., Centr.-Amer.,
Col., U. S. (Ariz., N. Mex., Tex.)
10. *vazquezae* Drake and Hottes, 1951 Mex.